Abstract of Dissertation

TITLE: Role of homocysteine in central and hemi-central retinal vein occlusion: a case-control study

DEPARTMENT: Ophthalmology

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DGREE AND SUBJECT: MS Ophthalmology

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OBJECTIVES:

To determine the association of hyperhomocysteinemia with central and hemi-central retinal vein occlusion and the correlation of serum levels of homocysteine with vitamin B12 and folate of the study subjects

METHODS:

This was a hospital-based, case control study. Patients with central and hemi-central retinal vein occlusion, and age and gender matched controls without central and hemi-central retinal vein occlusion, seen in the Department of Ophthalmology, who met the eligibility criteria, were enrolled after obtaining informed consent. A questionnaire was administered to all the participants, followed by a complete ophthalmological examination and relevant investigations. A fasting venous blood sample was collected from all participants for the estimation of serum homocysteine, vitamin B12 and folate levels. Data obtained were collated and analyzed.

RESULTS:

There was no statistically significant association of hyperhomocysteinemia with central and hemi-central retinal vein occlusion ($p=0.81$), but there was a statistically significant association of hypertension, hyperlipidemia and abnormal blood profile with central and hemi-central retinal vein occlusion. There was a strong negative correlation between serum levels of homocysteine and vitamin B12 (Pearson correlation coefficient of -0.3874 and p-value of 0.0005), and between serum levels of homocysteine and folate (Pearson correlation coefficient of -0.3886 and p-value of 0.0004) of the study subjects.

Key words: homocysteine, vitamin B12, folate, central retinal vein occlusion, hemi central retinal vein occlusion, case control study